

IN THE CLAIMS:

1. (Currently amended) A method of determining the stage of disease caused by HCMV infection, comprising the step of:

determining expression levels in a first human cell sample of ~~one or more~~ a set of genes ~~comprising which are induced or repressed by HCMV~~, M24594, Interferon stimulated genes 54K; M87434, 71 kDa 2'5' oligoadenylate synthetase; X02875, (2'-5') oligo A synthetase E (1.8 kb RNA); X02874, (2'-5') oligo A synthetase E (1.6 kb RNA); M87284, 69 kDa 2'5' oligoadenylate synthetase; X02530, gamma-interferon inducible early response gene; L05072 Interferon regulatory factor 1 (IRF-1); X15949, Interferon regulatory factor 2 (IRF-2); X67325, Interferon-alpha inducible gene, p27 gene; H05300, Interferon-induced guanylate-binding protein 1; M55542, guanylate binding protein isoform II; D31887, KIAA0062 (cig 19); X88220, interferon inducible gene staf50; X02492, interferon-induced protein 6-16; R34698, interferon-inducible protein 9-27; M13755, interferon-induced 17 kDa/15 kDa protein; M28622, interferon beta; X17668, indoleamine 2,3-dioxygenase; M33882, MxA; M30818, MxB; X56841, HLA-E gene; T50250, est: homo to U51904, mouse IFN α -treated mRNA; M60618, nuclear autoantigen Sp100; M73778, PML-1; R39857, est = X97630 – serine/threonine protein kinase EMK; H02889, est = Y11366 IMPA gene; U25994, cell death protein (RIP protein kinase); D21209, protein tyrosine phosphatase (PTP-BAS type 1); X77278, HYL tyrosine kinase; R60908, est = X74764 – receptor protein tyrosine kinase; H65441, est = U78027, L35265 – Bruton's tyrosine kinase; and X16416, proto-oncogene tyrosine-protein kinase (abl), wherein the first human cell sample comprises cells of a patient infected with HCMV, wherein the first human cell sample consists essentially of HCMV-infected cells, ~~wherein the expression levels of the one or more genes correlates with stage of disease progression of the HCMV infection.~~

2. (Currently amended) A method of determining the extent of tissue damage caused by HCMV infection, comprising the step of:

determining expression levels in a first human cell sample of ~~one or more~~ a set of genes ~~comprising which are induced or repressed by HCMV~~, M24594, Interferon

stimulated genes 54K; M87434, 71 kDa 2'5' oligoadenylate synthetase; X02875, (2'-5') oligo A synthetase E (1.8 kb RNA); X02874, (2'-5') oligo A synthetase E (1.6 kb RNA); M87284, 69 kDa 2'5' oligoadenylate synthetase; X02530, gamma-interferon inducible early response gene; L05072 Interferon regulatory factor 1 (IRF-1); X15949, Interferon regulatory factor 2 (IRF-2); X67325, Interferon-alpha inducible gene, p27 gene; H05300, Interferon-induced guanylate-binding protein 1; M55542, guanylate binding protein isoform II; D31887, KIAA0062 (cig 19); X88220, interferon inducible gene staf50; X02492, interferon-induced protein 6-16; R34698, interferon-inducible protein 9-27; M13755, interferon-induced 17 kDa/15 kDa protein; M28622, interferon beta; X17668, indoleamine 2,3-dioxygenase; M33882, MxA; M30818, MxB; X56841, HLA-E gene; T50250, est: homo to U51904, mouse IFN α -treated mRNA; M60618, nuclear autoantigen Sp100; M73778, PML-1; R39857, est = X97630 – serine/threonine protein kinase EMK; H02889, est = Y11366 IMPA gene; U25994, cell death protein (RIP protein kinase); D21209, protein tyrosine phosphatase (PTP-BAS type 1); X77278, HYL tyrosine kinase; R60908, est = X74764 – receptor protein tyrosine kinase; H65441, est = U78027, L35265 – Bruton's tyrosine kinase; and X16416, proto-oncogene tyrosine-protein kinase (abl), wherein the first human cell sample comprises cells of a patient infected with HCMV, wherein the first human cell sample consists essentially of HCMV-infected cells, ~~wherein the expression levels of the one or more genes correlates with extent of tissue damage caused by the HCMV infection.~~

3. (Currently amended) A method for screening to identify candidate drugs for preventing disease symptoms caused by HCMV, comprising the steps of:
 - contacting human cells with HCMV and a test agent;
 - determining expression levels of ~~one or more~~ a set of genes comprising which are induced or repressed by HCMV M24594, Interferon stimulated genes 54K; M87434, 71 kDa 2'5' oligoadenylate synthetase; X02875, (2'-5') oligo A synthetase E (1.8 kb RNA); X02874, (2'-5') oligo A synthetase E (1.6 kb RNA); M87284, 69 kDa 2'5' oligoadenylate synthetase; X02530, gamma-interferon inducible early response gene; L05072 Interferon regulatory factor 1 (IRF-1); X15949, Interferon regulatory factor 2 (IRF-2); X67325, Interferon-alpha inducible gene, p27 gene;

H05300, Interferon-induced guanylate-binding protein 1; M55542, guanylate binding protein isoform II; D31887, KIAA0062 (cig 19); X88220, interferon inducible gene staf50; X02492, interferon-induced protein 6-16; R34698, interferon-inducible protein 9-27; M13755, interferon-induced 17 kDa/15 kDa protein; M28622, interferon beta; X17668, indoleamine 2,3-dioxygenase; M33882, MxA; M30818, MxB; X56841, HLA-E gene; T50250, est: homo to U51904, mouse IFN α -treated mRNA; M60618, nuclear autoantigen Sp100; M73778, PML-1; R39857, est = X97630 – serine/threonine protein kinase EMK; H02889, est = Y11366 IMPA gene; U25994, cell death protein (RIP protein kinase); D21209, protein tyrosine phosphatase (PTP-BAS type 1); X77278, HYL tyrosine kinase; R60908, est = X74764 – receptor protein tyrosine kinase; H65441, est = U78027, L35265 – Bruton's tyrosine kinase; and X16416, proto-oncogene tyrosine-protein kinase (abl);

identifying a test agent as a candidate drug if the test agent causes the human cells to express ~~the~~ one or more of the set of genes at a level at which the human cells express the one or more genes in the absence of HCMV.

4. (Canceled) ~~The method of claim 1, 2, or 3 wherein the one or more genes are selected from the group consisting of those genes identified in Table 1 as induced or repressed by HCMV.~~
5. (Currently amended) The method of claim 1, 2, or 3 wherein ~~the~~ one or more of the set of genes are induced or repressed to a level which is at least two-fold different than the level of expression in the absence of HCMV.
6. (Currently amended) The method of claim 1, 2, or 3 wherein ~~the~~ one or more of the set of genes are induced or repressed to a level which is at least four-fold different than the level of expression in the absence of HCMV.
7. (Currently amended) The method of claim 1, 2, or 3 wherein ~~the~~ one or more of the set of genes are induced or repressed to a level which is at least eight-fold different than the level of expression in the absence of HCMV.
8. (Currently amended) The method of claim 1, 2, or 3 wherein ~~the~~ one or more of the set of genes are induced or repressed to a level which is at least ten-fold different than the level of expression in the absence of HCMV.

9. (Currently amended) The method of claim 1, 2, or 3 wherein ~~the~~ one or more of the set of genes are induced or repressed to a level which is at least fifteen-fold different than the level of expression in the absence of HCMV.
10. (Currently amended) The method of claim 1, 2, or 3 in which the step of determining is performed by measuring amounts of mRNA expressed by the ~~one or more~~ set of genes.
11. (Currently amended) The method of claim 1, 2, or 3 in which the step of determining is performed by measuring amounts of protein expressed by the ~~one or more~~ set of genes. [[.]]
12. (Original) The method of claim 1, 2, or 3 in which the step of determining is performed using an array of oligonucleotides.
13. (Currently amended) The method of claim 1, 2, or 3 in which the step of determining ~~is~~ is performed using serial analysis of gene expression.
14. (Original) The method of claim 1, 2, or 3 in which the step of determining is performed using hybridization of nucleic acids on a solid support.
15. (Original) The method of claim 1, 2, or 3 in which the step of determining is performed using cDNA which is made using mRNA collected from the human cells as a template.
16. (Original) The method of claim 1, 2, or 3 in which a fluorescent label is used to determine expression levels.
17. (Currently amended) The method of claim 1, 2, or 3 in which the ~~one or more~~ set of genes comprise *HLA-E*.
18. (Currently amended) The method of claim 1, 2, or 3 in which the ~~one or more~~ set of genes comprise *Ro/SSA*.
19. (Currently amended) The method of claim 1, 2, or 3 in which the ~~one or more~~ set of genes comprise *lipocortin-1*.
20. (Currently amended) The method of claim 1, 2, or 3 in which the ~~one or more~~ set of genes comprise *cPLA2*.
21. (Currently amended) The method of claim 1, 2, or 3 in which the ~~one or more~~ set of genes comprise *COX-2*.

22. (Currently amended) The method of claim 1, 2, or 3 in which the ~~one or more~~ set of genes comprise *thrombospondin-1*.
23. (Currently amended) The method of claim 1, 2, or 3 in which the ~~one or more~~ set of genes comprise *MITF*.
24. (Canceled) ~~The method of claim 1, 2, or 3 in which expression levels of at least 2 genes are determined.~~
25. (Canceled) ~~The method of claim 1, 2, or 3 in which expression levels of at least 5 genes are determined.~~
26. (Canceled) ~~The method of claim 1, 2, or 3 in which expression levels of at least 10 genes are determined.~~
27. (Canceled) ~~The method of claim 1, 2, or 3 in which expression levels of at least 15 genes are determined.~~
28. (Canceled) ~~The method of claim 1, 2, or 3 in which expression levels of at least 20 genes are determined.~~
29. (Canceled) ~~The method of claim 1, 2, or 3 in which expression levels of at least 25 genes are determined.~~
30. (Original) The method of claim 1, 2, or 3 in which expression levels of at least 30 genes are determined.
31. (Original) The method of claim 1, 2, or 3 in which expression levels of at least 50 genes are determined.
32. (Original) The method of claim 1, 2, or 3 in which expression levels of at least 100 genes are determined.
33. (Original) The method of claim 1, 2, or 3 in which expression levels of at least 200 genes are determined.
34. (Original) The method of claim 1, 2, or 3 in which expression levels of at least 250 genes are determined.
35. (Original) The method of claim 1, 2, or 3 in which expression levels of at least 500 genes are determined.
36. (Original) The method of claim 1, 2, or 3 in which expression levels of at least 1000 genes are determined.
37. (Original) The method of claim 1, 2, or 3 in which the human cells are fibroblasts.

38. (Original) The method of claim 1, 2, or 3 in which the human cells are lymphocytes.
39. (Original) The method of claim 1, 2, or 3 in which the human cells are epithelial cells.
40. (Original) The method of claim 1, 2, or 3 in which the human cells are lung epithelial cells.
41. (Original) The method of claim 1, 2, or 3 in which the human cells are neuronal cells.
42. (Currently amended) The method of claim 1 or 2 further comprising the step of:
determining expression levels in a second human cell sample of said ~~one or more~~ ~~genes which are induced or repressed by HCMV~~, wherein the second human cell sample comprises cells of said patient, wherein the second human cell sample consists essentially of uninfected cells, wherein the first and the second human cell sample comprise the same cell type;
comparing the expression levels determined in the first and the second human cell samples.
43. (Original) The method of claim 1 or 2 wherein the expression levels determined in the first human cell sample are compared to expression levels determined for a reference sample of uninfected human cells of the same cell type.
44. (Currently amended) The method of claim 1 further comprising the step of:
~~correlating~~ using the determined expression levels of the set of ~~one or more~~ genes ~~with~~ to identify the stage of disease progression of the HCMV infection in the patient.
45. (Currently amended) The method of claim 2 further comprising the step of:
~~correlating~~ using the determined expression levels of the set of ~~one or more~~ genes ~~with~~ to identify the extent of tissue damage caused by the HCMV infection in the patient.
46. (Canceled)
47. (Canceled)

IN THE DRAWINGS:

A substitute Figure 4 is provided. This Figure is a formal drawing.